

The French Republic

## Right of the Invention

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Use of cultures of fresh water algae (particularly Chlorella type) for cosmetic use  
Doctor Robert MAURIN residing in France (Seine)

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This invention is related to the use of cultures of fresh water algae in the field of cosmetic products provided under the form of masks, faits, cream, ampuls, and products in the general way, under the any form intended external application.

Recent works actually showed the existence of , for example, chlorella type in the algae.

1. Protein having 30%~50% of amino acid (glutamic acid, alanine, gamma acid, butyric amine) according to the species.
2. Lipidic fraction particularly contained fatty acid not being saturated with  $C_{14}$  ~  $C_{20}$  (and which are easily assimilated by the epidermis.)
3. Sterols (0.1%~0.2%)

These sterols are biologically important interest because of their chemical similarity with cortisone (for their synthesis they can work as principal materials)

4. Vitamins and, particularly, according to John S. Burlew:

1.5~6.5mg of vit. B<sub>1</sub> per 1g;

0.3~0.6mg of ascorbic acid per 1g;

which is almost equivalent to the content of lemon juice well known as enriched source of vit. C;

6 gamma of vit. K per 1g.

In addition, chlorella contains pantothenic acid and carotene in which the role on the epidermis is almost similar to that of vit. B<sub>12</sub>.

Cultures of chlorella could be incorporated with cosmetic products after centrifugation and drying.

We could also start from a suspension in the medium nutritive just as it is or enriched by centrifugation and decantation, and introduce directly this suspension of algae in the course of production of cosmetic products.

The stability of the suspension is obtained by the emulsifiers and gelling.

Finally, the suspension of algae or the concentrated extract could be treated by the physical association (heat, action of volatile solvent, etc.) or chemical (action of alkalines, acids, etc.), in order to obtain the chlorella derivative substances and, being able to used for cosmetic objects.

Doctor Robert MAURIN.